

WHAT IS CLAIMED IS:

1. An interface controller for managing operation of a plurality of devices via a wide area network, each of the devices having a unique communication protocol associated therewith, the interface controller comprising:

a network communications layer for communicating with the plurality of devices via the wide area network and a client application associated with the plurality of devices; and

an information processing layer for communicating with the network communications layer, the information processing layer having a set of objects corresponding to each of the plurality of devices, the information processing layer also being for interacting with a data access layer on behalf of each of the plurality of devices using the corresponding objects, interaction between the information processing layer and the data access layer on behalf of all of the plurality of devices being governed by a single set of rules.

2. The interface controller of claim 1 wherein the network communications layer is configured to communicate with the client application using eXtensible Mark-up Language (XML) and the TCP/IP protocol.

3. The interface controller of 2 wherein the network communications layer is further configured to communicate with the client application using HTTP posts.

4. The interface controller of claim 3 wherein an active server page layer is associated with the network communications layer for instantiating one of a plurality of

network communications objects associated with the network communications layer in response to one of the HTTP posts from the client application.

5           5.       The interface controller of claim 1 wherein the network communications layer is configured to instantiate selected ones of the objects associated with the information processing layer in response to messages from the client application.

10           6.       The interface controller of claim 1 wherein each of the objects corresponding to each of the plurality of devices corresponds to a function to be performed by the information processing layer on behalf of the corresponding device.

15           7.       The interface controller of claim 6 wherein selected ones of the functions correspond to retrieval of information from a database by the information processing layer via the data access layer.

20           8.       The interface controller of claim 6 wherein selected ones of the functions correspond to communication with the corresponding device by the information processing layer via the network communications layer, the wide area network, and the client application.

            9.       The interface controller of claim 8 further comprising a processing utility which instructs the information processing layer to communicate with the corresponding device in response to notification from an external system.

10. The interface controller of claim 1 further comprising the data access layer which is colocated with the network communications layer and the information processing layer, and which facilitates interaction between the information processing layer and at least one associated database.

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11. The interface controller of claim 10 wherein the at least one associated database comprises a SQL database, the data access layer being configured to communicate with the SQL database.

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12. The interface controller of claim 10 wherein the at least one database comprises a plurality of databases each having its own unique format, the data access layer being configured to communicate with each of the databases according to the corresponding format.

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13. The interface controller of claim 1 wherein the information processing layer is configured to communicate with the data access layer and interact with at least one database associated therewith via the network communications layer and the wide area network.

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14. The interface controller of claim 13 wherein the single set of rules corresponds to the information processing layer.

15. The interface controller of claim 13 wherein the single set of rules corresponds to the network communications layer.

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16. The interface controller of claim 1 wherein the devices comprise hospitality industry devices and the data access layer enables access by the information processing layer to a property management system.

5 17. A client system for enabling management of the operation of a plurality of associated devices by a remote interface controller via a wide area network, each of the plurality of devices having a unique communication protocol associated therewith, the client system comprising a client application for communicating with each of the plurality of devices and the interface controller via the wide area network, the client application also  
10 being for enabling the interface controller to interact with at least one database on behalf of all of the plurality of devices according to a single set of rules.

18. The client system of claim 17 wherein a subset of the plurality of devices comprise serial devices, the client system further comprising a serial communications layer  
15 configured to facilitate communication between the client application and each of the serial devices.

19. The client system of 17 wherein the client application is configured to communicate with the interface controller using eXtensible Mark-up Language (XML) and  
20 the TCP/IP protocol.

20. The client system of 19 wherein the client application is further configured to employ HTTP posts to a server associated with the interface controller to communicate with the interface controller.

21. The client system of claim 17 further comprising a network communications layer configured to facilitate communication between the client application and the interface controller via the wide area network.

5 22. An information provider system for communicating with an interface controller via a wide area network, the interface controller being for managing operation of a plurality of devices via the wide area network, each of the devices having a unique communication protocol associated therewith, the information provider system comprising a data access layer and at least one database, the data access layer being configured to  
10 facilitate interaction by the interface controller with the at least one database on behalf of all of the plurality of devices according to a single set of rules.

23. The information provider system of claim 22 further comprising a network communications layer configured to facilitate communication between the data access layer  
15 and the interface controller via the wide area network.

24. A system for managing operation of a plurality of devices via a wide area network, each of the devices having a unique communication protocol associated therewith, the system comprising:  
20 a client application for communicating with each of the plurality of devices;  
a network communications layer for communicating with the plurality of devices via the wide area network and the client application;  
an information processing layer for communicating with the network communications layer, the information processing layer having a set of objects  
25 corresponding to each of the plurality of devices, the information processing layer also being

for interacting with a data access layer on behalf of each of the plurality of devices using the corresponding objects, interaction between the information processing layer and the data access layer on behalf of all of the plurality of devices being governed by a single set of rules; and

- 5           the data access layer for facilitating access by the objects associated with the information processing layer to at least one database.

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